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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,174	06/30/2006	Roderick Dayton	16-812 PCT	2134
26294 7590 09/03/2009 TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 1300 EAST NINTH STREET, SUITE 1700 CLEVEVLAND, OH 44114			EXAMINER GUTMAN, HILARY L	
			ART UNIT 3612	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/585,174

## Applicant(s)

DAYTON, RODERICK

## Examiner

Hilary Gutman

## Art Unit

3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)
- Paper No(s)/Mail Date 7/31/09, 8/30/07, & 7/19/07
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the non-motorized wheeled vehicle of claim 26 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are

canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 19-20 been renumbered 20-21.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16-17 are 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation “the...wheel assemblies” in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation “the rear wheels” in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitations “the air dam” in line 4 and “the...wheel assemblies” in line 6. There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 6, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Jungert (7,055,891).

Jungert discloses for use with a land vehicle, an air dam comprising a plurality of flexible deflector cells 37, 38, 39, disposed adjacent to one another on an air dam frame that is mounted to an underside of the land vehicle, wherein the cells project from the underside of the vehicle into a space between the underside of the vehicle and the ground.

Jungert inherently discloses a method for deflecting air encountered by a land vehicle having a frame suspended above the ground by a plurality of wheels, the method comprising suspending a bank of adjacent flexible air dam cells 37, 38, 39 between the vehicle frame and the ground.

7. Claims 1, 4, 8, 11-14, 19, 22, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Parks (4,585,262).

Parks discloses the claimed invention including a system for reducing aerodynamic drag of a vehicle, the system comprising: a mounting fixture 22 being supported to an underside of a vehicle frame, the mounting fixture having a plurality of nipples 24 projecting from the mounting fixture toward the ground; and an arcuately-shaped resiliently deflectable air barrier assembly 16, 20 comprising a plurality of independently flexible cells 20 that extend from the

underside of the wheeled vehicle to cover a substantial portion of the ground clearance between the underside of the vehicle and the ground, each of the cells being independently secured to a respective nipple of the plurality of nipples projecting from the mounting fixture.

Parks further discloses the cells 20 being of a material to provide sufficient stiffness to function as an air impermeable dam against air stream flow and also sufficiently yieldable to bend and pass over a curb 34. The cells are not limited to a circular cross section and could be molded to have a curvilinear shape.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jungert in view of Ortega et al. (6,974,178).

Jungert lacks the air dam cells for use on a trailer in an ogival shape. Ortega et al. teach the use of an air deflecting barrier for use on a trailer, pulled or carried by a vehicle, having an ogival shape. And it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the air dam cells of Jungert in an ogival shape on a trailer as taught by Ortega et al. in order to allow the trailer to have reduced drag.

10. Claims 15-16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks in view of Ortega et al. (6,974,178).

Parks lacks the air dam cells for use having an ogival shape and further lacks the air dam cells for use on a trailer. Ortega et al. teach the use of an air deflecting barrier for use on a trailer, pulled or carried by a vehicle, having an ogival shape. And it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the air dam cells of Parks in an ogival shape and on a trailer as taught by Ortega et al. in order to provide optimal drag reduction for a vehicle or trailer.

11. Claims 7, 9-10, 23-24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks as applied to claims 4, 22, and 26 above, and in view of Ito et al. (6,644,700).

Parks inherently discloses the material of the cells to be a plastic since this material provides sufficient stiffness to function as an air impermeable dam against air stream flow and also sufficiently yieldable to bend and pass over a curb 34 and can easily be molded.

Parks is not specific on the material being an elastomeric material specifically silicon rubber with a durometer substantially equal to 60. But it is apparent that this material could have been used since silicone rubber is known in the prior art to retain flexibility resilience and tensile strength over a wide temperature range, making it optimal for use on Parks.

Ito et al. teaches the use of an elastomeric material, specifically a molded thermoplastic elastomer having a durometer of not more than 70 and not less than 50.

It should be noted, that although Ito et al. does not discreetly disclose the number 60, the range of 50-70 encompasses this durometer value and therefore satisfies the claim requirements. In addition, if a claimed value and a prior art range are close enough that one skilled in the art would have expected them to have the same properties, then there would be a prima facie case of obviousness and the set value in the claimed range is not deemed critical or inventive (MPEP 2114.05). Furthermore, there is no evidence of criticality of the claimed range.

Moreover, the specific material and durometer value is deemed to have been an obvious matter of design as being in the purview of ordinary engineering technique for one with ordinary skill in the art at the time of the invention. One with ordinary skill in the art understands that if a lesser cost yet suitable design or material is used that this may be an alternative. That person of ordinary skill also understands that materials may vary. Additionally, KSR, 550 US at 82 USPQ2d at 1396 supports a conclusion of obviousness under the reasoning of “obvious to try” by choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parks in view of Layfield et al. (7,578,541) in view of Ortega et al. (6,974,178).

Parks discloses the air dam cells as recited providing an arcuate shape, but lacks the specific shape being an ogival shape.

Ortega et al. teach the use of an ogival shape for an air dam to provide optimized air drag reduction over wheels of a trailer.



It would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the shape of the air dam cells of Parks in an ogival shape as taught by Ortega et al. in order to provide optimal drag reduction for a vehicle.

Parks, as modified, lacks the air dam cells for use on a trailer at a rear portion thereof that radiates toward a front portion of the trailer to protect the rear wheels thereof.

Layfield et al. teach the use of an air skirt 312C for a trailer 300 pulled or carried by a motor vehicle. The air skirt is provided at a rear portion thereof to protect the rear wheels 320 of the trailer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the air dam cells of Parks, as modified, at a rear portion of a trailer as taught by Layfield et al. in order to protect the rear wheels from an air stream passing thereover.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hilary Gutman whose telephone number is 571-272-6662. The examiner can normally be reached on flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on 571-272-6659. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hilary Gutman/  
Primary Examiner, Art Unit 3612